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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/849,525	05/20/2004	Jean-Christophe Ehrstrom	22130-00039-US	5569

59554 7590 11/14/2007

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EXAMINER	
ABOAGYE, MICHAEL	
ART UNIT	**PAPER NUMBER**
1793	

MAIL DATE	DELIVERY MODE
11/14/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/849,525	EHRSTROM ET AL.	
	Examiner	Art Unit	
	Michael Aboagye	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14 and 19* is/are pending in the application.

4a) Of the above claim(s) *15-18* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14 and 19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-14 and 19 are rejected U.S.C. 103(a) as being unpatentable over Waldron et al. (US Patent No. 6,168,067) in view of Sainfort et al. (US Patent No. 5,560,789).

Waldron et al. teaches a friction stir method of a first and a second structural members made of aluminum alloy comprising: conducting pre- solution heat treatment before friction stir welding the structural members; wherein said treatment is conducted at a time long enough to allow the β phase to dissolve (Waldron et al. column 4, lines 17-48); friction stir welding the structural members and thereafter conducting post weld heat treatment and quenching the welded structural members (Waldron et al. abstract, column 3, lines 36-67 and column 6, lines 12-45). Waldron et al. also teaches aluminum alloy containing copper and manganese (Waldron et al. column 3, line 60- column 4, line 5). Waldron et al. teaches heat treatment after rolling, extrusion or forging (the examiners interpretation is based on the fact that the work pieces utilized in Waldron et al. process, constitute a structural member preform, meaning already processed from the billet). Waldron et al. further teaches flushing an inert gas over the surface of a welding zone, during welding (Waldron et al., column 5, lines 37-54)

Waldron et al. does not teach a heat treatment with duration twice as long as the normal homogenization or solution heat treatment duration, as claimed.

Sainfort et al. teaches a heat treating aluminum alloy for obtaining high mechanical strength comprising: conducting homogenizing and solution heat treatment at a temperature range of less than 10 degrees Celsius or preferably less than 5 degrees Celsius from the melting point of said alloy to avoid incipient melting of the alloy (column 2, lines 24-42), (note, both temperatures are not more than 20 degrees Celsius, hence the claimed limitation is met); wherein said heat treatment is allowed to run for a period of 48 hours (note, this heat treatment duration is the same as what the applicant claims as 2t, reference to applicant's specification paragraph [0016]), and at a temperature of 475 degrees Celsius (less than 500 degrees, hence the claimed limitation is met). Sainfort et al. teaches heat treatment leading to specific melting peak energy of less than 2 J/g (see, Sainfort et al., column 1, lines 52-63) , (note less than 2 J/g, could also imply less than 0.5J/g or less 1J/g, hence the claimed limitations are met). Sainfort et al. teaches heat treatment before rolling, extrusion or forging (column 2, lines 35-50). Sainfort et al. also teaches aluminum alloy of the 7000 series containing copper (abstract); said alloy also contains chromium at a weight of less than about 0. 15%, and a zirconium at a weight of less than about 0.09% (Sainfort et al., abstract), furthermore, and aluminum alloy having manganese content by weight at 0-0.5 % (Sainfort et al., abstract, and column 1, lines 53-63).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to modify the process of Waldron et al. to use a solution heat treatment time twice that of conventional and at a temperature very close to the

melting temperature, but avoiding incipient melting of the aluminum alloy as taught by Sainfort et al. to enable complete dissolution of soluble phases and ultimately enhancing the mechanical strength of the material (Sainfort et al, abstract, column 2, lines 24-50).

Response to Arguments

3. The examiner acknowledges the applicants' amendment received by USPTO on October 29, 2007. Claims 15-18 remain withdrawn, new claim 19 has been added, therefore 1-14 and 19 are currently under consideration in the application.

4. Applicant's arguments with respect to claims 1-14 and 19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Aboagye whose telephone number is 571-272-8165. The examiner can normally be reached on Mon - Fri 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jonathan Johnson can be reached on 571-272-1177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jonathan Johnson
SPE

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Michael Aboagye
Assistant Examiner
Art Unit 1793
11/06/2007